

# **Decision Document**

**Solid Waste Management Units B-13  
Building 101-29/36 Catchment Pit  
Hawthorne Army Depot  
Hawthorne, Nevada**



**October 1999**



Hawthorne Army  
Depot



# Decision Document SWMU B-13

October 1999

RECEIVED

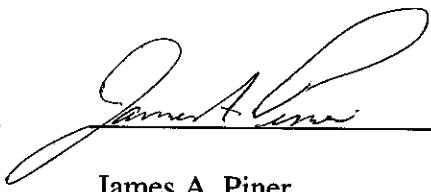
DEC 02 1999

ENVIRONMENTAL PROTECTION

The selected remedy is protective of human health and the environment. It has been shown that a complete pathway to human health and the environment does not exist, and there is no potential for an exposure pathway to be completed in the future.

U. S. Army

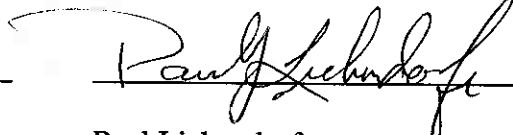
01 DEC 1999



James A. Piner  
Lieutenant Colonel, U.S. Army

State of Nevada

6 Dec' 99



Paul Liebendorfer  
Chief, Bureau of Federal Facilities

# **Decision Document**

**Solid Waste Management Units B-13  
Building 101-29/36 Catchment Pit  
Hawthorne Army Depot  
Hawthorne, Nevada**



**October 1999**



Hawthorne Army  
Depot



**Decision Document**  
**SWMU B-13, Building 101-29/36 Catchment Pit**  
**Hawthorne Army Depot**  
**Hawthorne, Nevada**

### **1.0 Introduction**

This decision document describes the rationale for the proposed closure of SWMU B-13, Building 101-29/36 catchment pit, at the Hawthorne Army Depot (HWAD), Hawthorne, Nevada. This document was prepared by the U.S. Army Corps of Engineers, Sacramento District, HWAD and the Nevada Department of Environmental Protection (NDEP).

Tetra Tech, Inc. (Tt), and Ecology and Environment (E&E) were tasked by the US Army Corps of Engineers, Sacramento District (USACE), to perform remedial investigations and ground water monitoring at the Hawthorne Army Depot (HWAD), Hawthorne, Nevada. These tasks were conducted from early 1994 through 1997, primarily at solid waste management units (SWMUs) designated by the Army and the Nevada Division of Environmental Protection (NDEP). The NDEP is the lead regulatory agency for environmental issues at HWAD. The purpose of the sampling was to determine the extent and degree of environmental impacts, if any, associated with activities performed at each SWMU. The primary goal of the investigation was to assess the environmental impacts at each SWMU and to report the findings, present conclusions, and recommend any remediation if necessary.

With guidance from the NDEP, basewide proposed closure goals (PCGs) for soil were established as acceptable levels so that SWMU closure could be recommended and to assist in directing the investigative efforts toward those SWMUs where the target analytes were of greatest concern (Appendix B). These PCGs were used as action levels throughout this investigation and are used for comparison with the detected analytes in this report.

### **2.0 Site History**

SWMU B13 is in the HWAD's central magazine area, on the southwest side of the 101 Production Area (Figure 1-1). SWMU B13 is an inactive unlined surface catchment pit located between Buildings 101-29 and 101-36 and 60 feet south of Building 101-56 (Figure 1-2). The catchment pit measures approximately 120 feet long by 45 feet wide and is up to seven feet deep.

The USACE, HWAD, and the NDEP agreed to define the boundaries of each SWMU using annotated monuments and survey pins. As part of E&E's 1997 field investigations a survey monument was constructed and surveyed at SWMU B13. A brass survey pin on the monument designates the monument number HWAAP-82-1996 and the SWMU number B13. Three corner pins were set and surveyed to define a SWMU boundary with

the monument as the northwest corner. The location of these corner markers and the SWMU boundary are shown on Figure 1-2. Survey data is presented in Appendix A.

### **3.0 Site Conditions**

Soils encountered during E&E's remedial investigation of SWMU B13 were mostly coarse to fine sands with occasional silt and gravel.

During E&E's 1994 investigation and Tt's 1997 first and second quarter ground water monitoring (Tt 1997a, 1997b), the depth to ground water was measured at approximately 100 feet bgs. Based on the analytical results from the previous investigations and past uses of the impoundment, the target analytes at SWMU B13 were metals, explosives, petroleum hydrocarbons, and semivolatile organics generally associated with petroleum hydrocarbons. After the investigations the chemicals of concern for the SWMU were explosives.

### **4.0 INVESTIGATIONS**

Site inspections of SWMU B13 were conducted by the USAEHA (1988), Jacobs Engineering (1988), and RAI (RAI 1992). During these inspections, red-stained soil was noted in the catchment pit and was considered to be TNT contamination. No investigation activities were conducted during these inspections, and no samples were collected from the SWMU at that time. No other previous soils investigations have been performed at this SWMU.

In 1989, WaterWork Corporation conducted a ground water investigation in response to a July 1987 closure order issued for the 101 Production Area by the NDEP (WaterWork 1990). Visible explosives staining was detected in six surface and sub-surface soil samples taken from SWMU 13. Field screening tests indicated that one of the six samples showed contamination levels above safe shipping levels. The rest of the soil samples were submitted for laboratory analysis. None of the laboratory test results from the shipped samples indicated explosives concentrations above PCG's. In 1994, sampling activities by E&E for the remedial investigation at SWMU B13 included collecting and analyzing surface and subsurface soil samples (fig. 3-1).

In late 1998 questions began to arise that the red stained soil may not be explosives contaminated soil; and as in other SWMU's, the high levels of explosives contamination detected by field test methods were not being confirmed by laboratory analysis. The Corps of Engineers took samples of the stained soil in January 1999 from several sites in the 101 area including SWMU B-13. When the samples taken from B-13 did not indicate any explosives contamination, it was determined to sample the SWMU for closure. In March of 1999 The Corps of Engineers took soil samples from SWMU B-13 as a confirmation sampling event. The sample locations from the March 1999 sampling event are shown on figure 4.

## **5.0 Investigation Results**

During E&E's 1994 remedial investigation, arsenic, barium, total chromium, and lead were detected at low concentrations in surface and near-surface samples collected at SWMU B13. All of these detected metals concentrations are below the HWAD PCGs for soil and are within the range of background levels observed in the Walker Valley soils. The explosives TNB, TNT, 2-amino-DNT, 2,4-DNT, and RDX were detected at both of the hand auger locations in the catchment pit. The hand auger sample collected at SWMU B13 from a depth of five feet bgs at location HA02 had a concentration of RDX greater than six percent by weight. This concentration of RDX greatly exceeds the PCG for RDX of 64 mg/kg, and likely contains other explosives at concentrations that also exceed their respective PCG. All other explosives concentrations detected in the surface and near-surface samples at SWMU B13 were below their PCG (appendix C).

The Corps of Engineers sampling event of January 1999 indicated that the stained soil in B-13 did not exhibit any explosive's contamination above PCG's. The red staining was determined to be either bacteria, a photodegradation product of TNT, a dye used in production or natural soil coloration. In March 1999, 19 soil samples were collected from SWMU B-13. Table 1-1 provides a summary of the sampling results. All results were below PCG's, the largest detection was of RDX at 27 mg/kg. The laboratory analysis of these samles is presented in appendix D.

**TABLE 1-1**

<b>SWMU B-13</b>					
CONFORMATION SAMPLE RESULTS					
SAMPLE NUMBER	TNT(ppm)	RDX (ppm)	SAMPLE NUMBER	TNT (ppm)	RDX (ppm)
CS13-BB-01	23	0.3J	CS13-SA-01	<0.26	17
CS13-BB-02	10	23	CS13-SA-02	<1.3	27
			CS13-SA-03	<0.26	<0.26
CS13-SW-01	<0.26	6.42	CS13-SA-04	<0.26	0.2J
CS13-SW-02	<0.26	4.9	CS13-SA-05	<0.26	<0.26
CS13-SW-03	<0.26	<0.26	CS13-SA-06	<0.26	1.1
CS13-SW-04	<0.26	<0.26	CS13-SA-07	<0.26	<0.26
CS13-SW-05	<0.26	<0.26	CS13-SA-08	<0.26	<0.26
CS13-SW-06	<0.26	<0.26	HA13-BB-01	2.8	<0.26
			HA13-BB-02	6.21	0.2J
			HA13-BB-03	0.37	<0.26

## **6.0 Remediation**

No remediation at this SWMU

## **7.0 Remediation Results**

Not Applicable

## **8.0 Public Involvement:**

It is the U.S. Department of Defense and Army policy to involve the local community throughout the investigation process at an installation. To initiate this involvement, HWAD has established and maintains a repository library at the local public library. This repository includes final copies of all past studies and other documents regarding environmental issues at HWAD. As future environmental documents are made available to HWAD the repository shall be updated.

HWAD has solicited community participation in establishment of a restoration and advisory board (RAB). To date there has been insufficient response and HWAD has not formed a RAB. HWAD has held open houses to inform the public of on going environmental issues. HWAD continues to solicit community involvement, and will establish a RAB should sufficient community interest be obtained.

## **9.0 Conclusions and Recommendations**

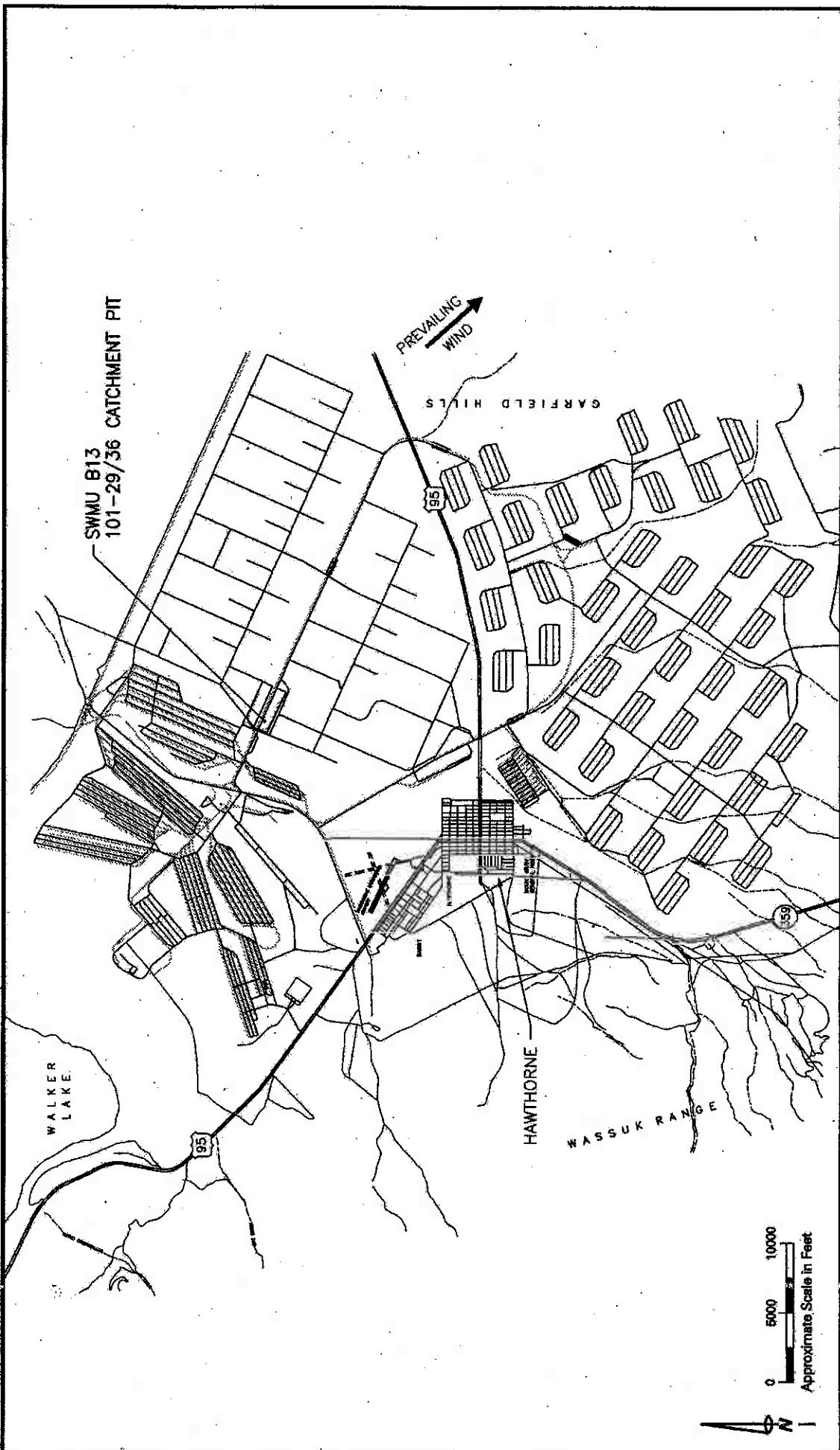
Based on investigation results, the basin at SWMU B-13 was backfilled with completed compost material, with a 3 " cover of clean soil on top. It is recommended that SWMU B-13 be closed with the restriction that no structure be constructed over the area where the basin was backfilled.

## **10.0 REFERENCES**

---

- Ecology and Environment. 1995. RCRA Facility Assessment Report for 24 Solid Waste Management Units, Hawthorne Army Depot, Hawthorne, Nevada. April 1995.
- Jacobs Engineering, 1988. RCRA Facility Assessment, Hawthorne Army Ammunition Plant, TES IV Work Assignment No. 433.
- Millsap, Herman. 1977. Hawthorne Army Depot. Personal communication via telephone with Richard Brunner of Tetra Tech, July 17, 1997.
- RAI. 1992. Site Screening Inspection (SSI) for the Hawthorne Army Ammunition Plant, Hawthorne, Nevada. Prepared for the US Army Corps of Engineers Toxic and Hazardous Materials Agency by Resource Applications, Inc., Falls Church, Virginia. December 1992.
- Tetra Tech. 1997a. Draft Quarterly Ground Water Monitoring Report, First Quarter 1997, Hawthorne Army Depot, Hawthorne, Nevada. April 1997.
- \_\_\_\_\_. 1997b. Quarterly Ground Water Monitoring Report, Second Quarter 1997, Hawthorne Army Depot, Hawthorne, Nevada. July 1997.
- \_\_\_\_\_. 1997c. Final Data Package with recommendations for future action, Group B solid waste management units, Hawthorne Army Depot, Hawthorne, Nevada, Volumes 1, 2a, and 2b. January 1997.
- \_\_\_\_\_. 1997d. Final Technical Memorandum Background Sampling at the Hawthorne Army Depot, Hawthorne, Nevada. March 1997.
- \_\_\_\_\_. 1997. Final Remedial Investigation Report, Hawthorne Army Depot, Hawthorne, Nevada. December 1997.
- USACE. 1995. Risk Assessment Handbook: Volume I Human Health Assessment (EM 200-1-4). USACE. June 1995.
- \_\_\_\_\_. 1997. Final Field Sampling Report, West 101 Production Area: Hawthorne Army Depot, Hawthorne, Nevada. April 1999.
- USAEEHA. 1988. Final Report. Ground Water Contamination Survey No. 38-26-0850-88. Evaluation of Solid Waste Management Units. HWAAP, Hawthorne, Nevada. May 12-19, 1987 and August 1-5, 1988.

- USATHAMA. 1977. Installation Assessment of Naval Ammunition Depot, Hawthorne, Nevada. U.S. Army Toxic and Hazardous Materials Agency, Aberdeen Proving Ground, Maryland. Records Evaluation Report No. 114.
- USEPA. 1989. Risk Assessment Guidance for Superfund. Volume I Human Health Evaluation Manual (Part A). December 1989.
- \_\_\_\_\_. 1996. Region IX Preliminary Remediation Goals. USEPA Region IX. August 1996.
- WaterWork. 1990. Hawthorne Army Ammunition Plant, Area 101 Surface Impoundments, Field and Lab Data and Analysis, Attachment 1-8.



SOURCE: TETRA TECH FINAL DATA PACKAGE, 1988 (REV. 1997)

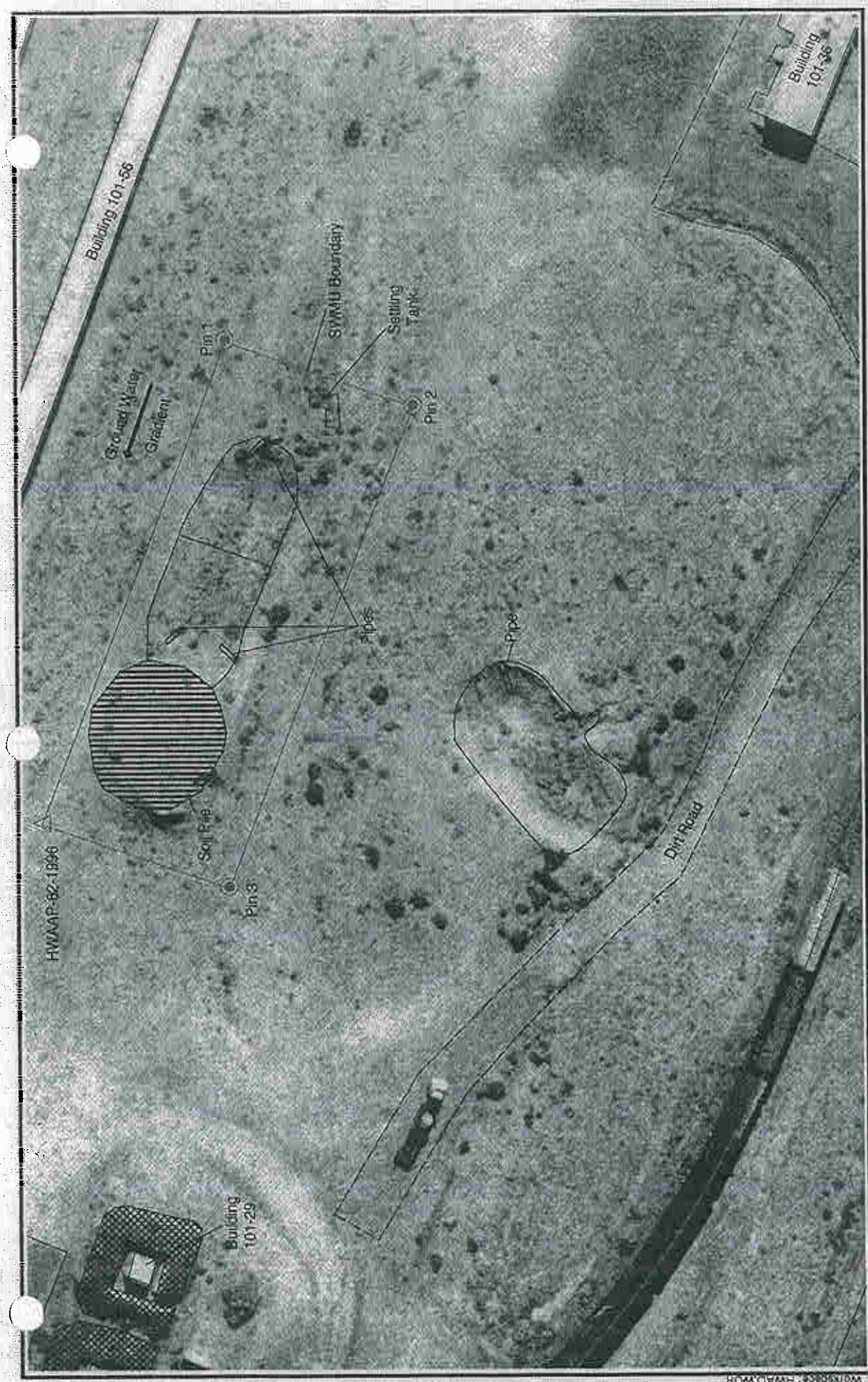
### **Location Map SWMU B13 101-29/36 Catchment Pit**

Hawthorne Army Depot  
Hawthorne, Nevada

**Site Map**  
**SWMU B13**  
**101-29/36 Catchment Pit**

Hawthorne Army Depot  
Hawthorne, Nevada

**Figure 1-2**

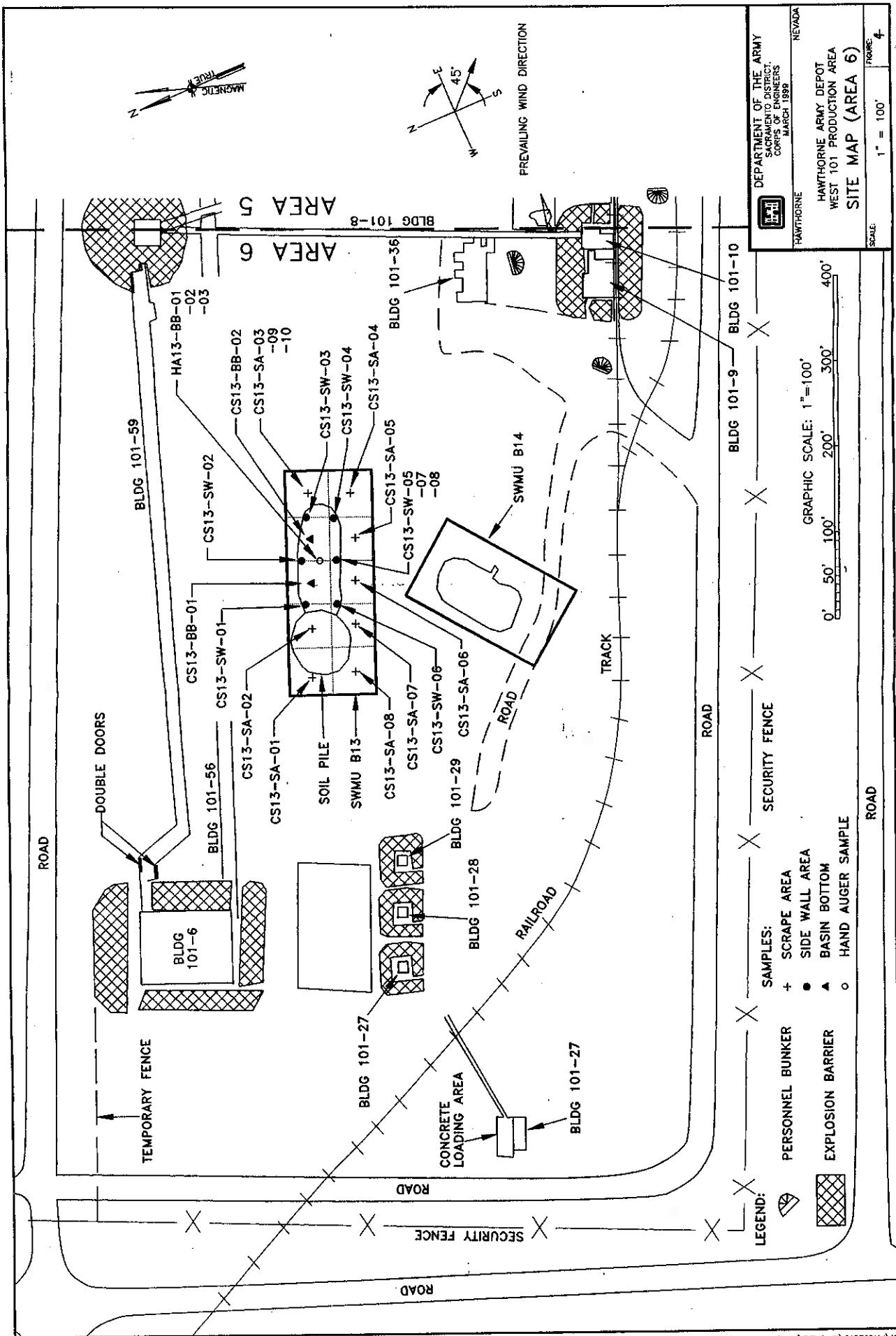


- Legend:**
- ◎ SWMU Monument
  - △ SWMU Boundary Corner Pt.
  - ☒ Explosion Barrier
  - ||||| Railroad

Tetra Tech, Inc.



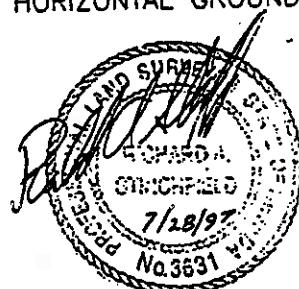
**Figure 3-1**



## **Appendix A**

## NOTES

1. FOR THE LOCATION OF THE FOLLOWING SWMU'S, REFER TO FIGURE 3-6 OF THE "FINAL R.C.R.A. FACILITY INVESTIGATION REPORT OF GROUP "A" SOLID WASTE MANAGEMENT UNITS A-04, B-16, B-21, B-24, B-26, AND H-01".
2. THE "HWAD" MONUMENTS AS SHOWN HEREIN AS "M", ARE A 1' X 1' X 2'+ CONCRETE MONUMENT WITH A BRASS CAP STAMPED AS PER SPECIFICATIONS. ALL OF THE OTHER CORNERS ARE MARKED BY A 5/8" RE-BAR WITH A PLASTIC CAP STAMPED "STINCHFIELD PLS 3631" UNLESS NOTED OTHERWISE ON THE MAPS.
3. HORIZONTAL DATUM IS BASED ON NAD 83(1994) AND MORE SPECIFICALLY, NGS STATION "W 2". "W 2" IS A FEDERAL BASE NETWORK CONTROL STATION AND IS LOCATED IN THE APPROXIMATE CENTER OF THIS PROJECT.
4. VERTICAL DATUM IS BASED ON NAVD 29. NAVD 88 ELEVATIONS HAVE BEEN SCALED AND THEREFORE ARE NOT ACCURATE. VERTICAL CONTROL USING GPS WAS USED TO ESTABLISH THE ELEVATIONS OF THE EXISTING CONTROL POINTS AND THE "HWAD" MONUMENTS. THE VALUE OF NGS STATION "W 2" WAS USED AS A BASIS FOR THE VERTICAL CONTROL.
5. COORDINATE VALUES OF EXISTING NGS CONTROL, TRAVERSE POINTS, AND HWAD MONUMENTS ARE STATE PLANE COORDINATES, WEST ZONE.
6. THE COMBINED FACTOR WAS CALCULATED USING THE FOLLOWING FIGURES. THE "MAP SCALE" AT POINT "W 2" IS 0.99990022, THE MEAN ELEVATION OF THE TOTAL PROJECT WAS TAKEN AS 4150.00 FEET ABOVE SEA LEVEL AND THE MEAN RADIUS OF THE EARTH WAS TAKEN AS 20,906,000 FEET. THE SEA LEVEL FACTOR WAS CALCULATED AS FOLLOWS:  $20,906,000 / 20,906,000 + 4150.00 = 0.999801532$ . THE COMBINED FACTOR (CF) WAS CALCULATED AS FOLLOWS:  $0.99990022 \times 0.999801532 = 0.999701772$ .
7. GROUND DISTANCE X CF (0.999801532) = GRID DISTANCE.
8. GRID DISTANCE X INVERSE CF (1.00298317) = GROUND DISTANCE.
9. COORDINATE VALUES OF ALL OTHER POINTS INCLUDING SWMU CORNERS OTHER THAN "HWAD" MONUMENTS, REFERENCE POINTS, TEST PIT OR HOLE LOCATIONS ETC., WERE CALCULATED USING GROUND DISTANCES AND ARE THEREFORE NOT TRUE STATE PLANE COORDINATES.
10. DISTANCES AS SHOWN ON THESE SWMU'S ARE HORIZONTAL GROUND DISTANCES.



ecology and environment, inc.

International Specialists in the Environment

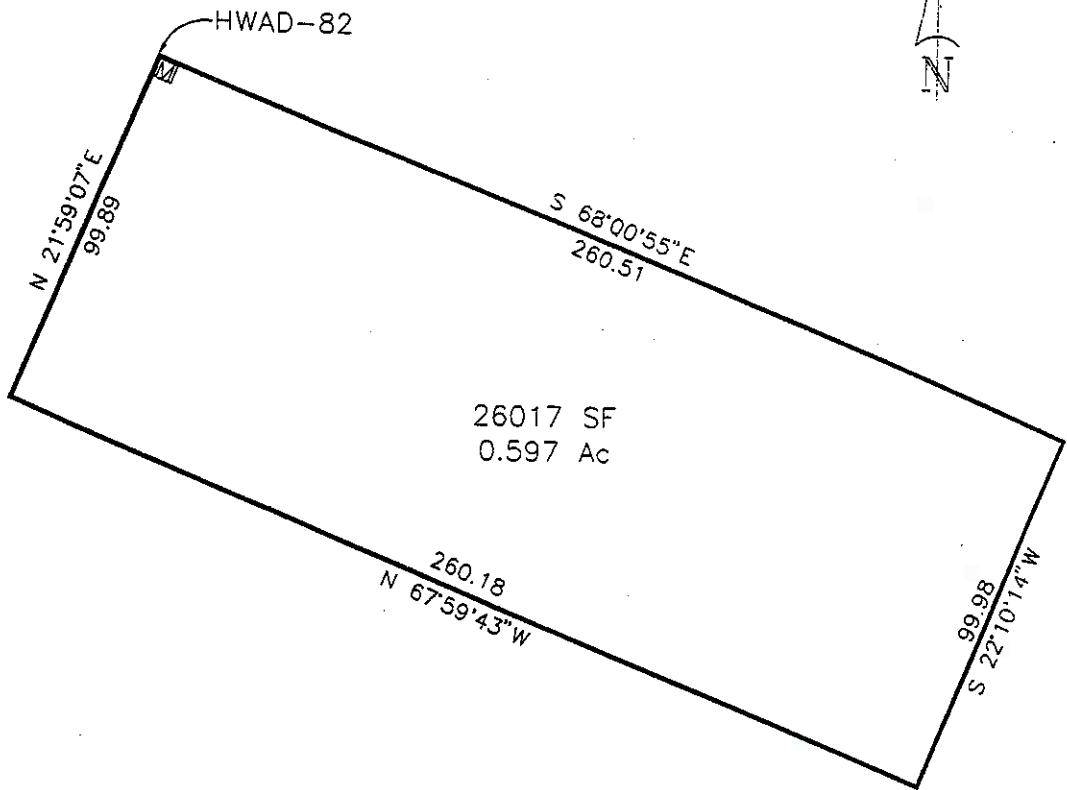
GENERAL NOTES

HAWTHORNE ARMY DEPOT

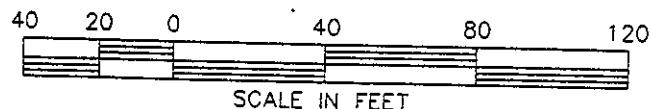
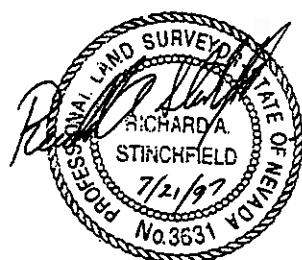


COMSTOCK  
LAND SURVEYING

777 LA RUE AVENUE, SUITE A  
RENO, NEVADA 89509



NW COR	N	14513058.126	E	2621339.677	ELEV 4185.888
NE COR	N	14512960.603	E	2621581.141	ELEV 4186.696
SE COR	N	14512868.017	E	2621543.514	ELEV 4186.155
SW COR	N	14512965.504	E	2621302.283	ELEV 4185.320



ecology and environment, inc.

International Specialists in the Environment

SWMU B-13

SHEET 13 OF 26



COMSTOCK  
LAND SURVEYING

777 LA RUE AVENUE, SUITE A  
RENO, NEVADA 89509  
PH (702) 786-2200

SWMU B13 Survey Data

Hawthorne Army Depot

Hawthorne, Nevada

SWMU	Point ID	Northing (feet)	Easting (feet)	Elevation
B13	CPS01	1389645.76	497038.77	NE
B13	SW01	1389548.42	497127.16	NE
B13	HA03	1389592.76	497091.17	NE
B13	HA02	1389614.76	497030.57	NE
B13	HA01	1389563.76	497108.97	NE
B13	Pin 3	1389606.95	496890.87	4185.320
B13	Pin 2	1389509.46	497132.1	4186.155
B13	Pin 1	1389602.05	497169.83	4186.696
B13	HWAAP-82-1996	1389699.57	496928.26	4185.888

Notes:

NE = Not established

Coordinate data based on electronic map file using the NAD 1927 datum.

Elevation data based on surveyors map using NGVD 1929 datum.

## **Appendix B**

**Proposed Closure Goals**  
**Hawthorne Army Depot**  
**Hawthorne, Nevada**

Constituent of Concern	Chemical Classification	Carcinogenic (C) or Non-Carcinogenic (NC)	HWAD Proposed Closure Goals for Soil (mg/kg)	HWAD Proposed Closure Goal Source
Nitrate	Anion	NC ..	128,000	Calculated Subpart S <sup>a</sup>
2-Amino-dinitrotoluene	Explosive	NC	-	NA <sup>b</sup>
4-Amino-dinitrotoluene	Explosive	NC	-	NA
1,3-Dinitrobenzene	Explosive	NC	8	Calculated Subpart S
2,4-Dinitrotoluene	Explosive	NC	160	Calculated Subpart S
2,6-Dinitrotoluene	Explosive	NC	80	Calculated Subpart S
HMX	Explosive	NC	4,000	Calculated Subpart S
Nitrobenzene	Explosive	NC	40	Calculated Subpart S
Nitrotoluene (2-, 3-, 4-)	Explosive	NC	800	Calculated Subpart S
RDX	Explosive	NC	64	Calculated Subpart S
Tetryl	Explosive	NC	800	Calculated Subpart S
1,3,5-Trinitrobenzene	Explosive	NC	4	Calculated Subpart S
2,4,6-Trinitrotoluene	Explosive	C	233	Calculated Subpart S
Aluminum	Metal	NC	80,000	Calculated Subpart S
Arsenic (cancer endpoint)	Metal	C & NC	30	Background <sup>c</sup>
Barium and compounds	Metal	NC	5,600	Calculated Subpart S
Beryllium and compounds	Metal	C	1	Background
Cadmium and compounds	Metal	NC	40	Calculated Subpart S
Chromium III and compounds	Metal	NC	80,000	Calculated Subpart S
Lead	Metal	NC	1000	PRG <sup>d</sup>
Mercury and compounds (inorganic)	Metal	NC	24	Calculated Subpart S
Selenium	Metal	NC	400	Calculated Subpart S
Silver and compounds	Metal	NC	400	Calculated Subpart S
Acenaphthene	PAH	NC	4,800	Calculated Subpart S
Benzo[a]anthracene	PAH	C	0.96	Calculated Subpart S
Benzo[a]pyrene	PAH	C	0.10	Detection Limit <sup>e</sup>
Benzo[b]fluoranthene	PAH	C	0.96	Calculated Subpart S
Benzo[k]fluoranthene	PAH	C	10	Calculated Subpart S
Chrysene	PAH	C	96	Calculated Subpart S
Dibenz[ah]anthracene	PAH	C	0.96	Calculated Subpart S
Fluoranthene	PAH	NC	3,200	Calculated Subpart S
Fluorene	PAH	NC	3,200	Calculated Subpart S
Indeno[1,2,3-cd]pyrene	PAH	C	-	NA
Naphthalene	PAH	NC	3,200	Calculated Subpart S
Pyrene	PAH	NC	2,400	Calculated Subpart S
Total Petroleum Hydrocarbons as Diesel (TPH-d)	PAH	C	100	NDEP Level Clean-up <sup>f</sup>
Polychlorinated biphenyls (PCBs)	PCBs	C	25	TSCA <sup>g</sup>
Bis(2-ethylhexyl)phthalate (DEHP)	SVOC	C	1,600	Calculated Subpart S
Bromoform (tribromomethane)	SVOC	C	89	Calculated Subpart S

**Proposed Closure Goals**  
**Hawthorne Army Depot**  
**Hawthorne, Nevada**

Constituent of Concern	Chemical Classification	Carcinogenic (C) or Non-carcinogenic (NC)	HWAD Proposed Closure Goals for Soil (mg/kg)	HWAD Proposed Closure Goal Source
Butyl benzyl phthalate	SVOC	NC	16,000	Calculated Subpart S
Dibromochloromethane	SVOC	C	83	Calculated Subpart S
Dibutyl-phthalate	SVOC	NC	8,000	Calculated Subpart S
Diethyl phthalate	SVOC	NC	64,000	Calculated Subpart S
Phenanthrene	SVOC	-	-	NA
Phenol	SVOC	NC	48,000	Calculated Subpart S
Acetone	VOC	NC	800	Calculated Subpart S
Anthracene	VOC	NC	24,000	Calculated Subpart S
Benzene	VOC	C	24	Calculated Subpart S
Bis(2-chloroisopropyl)ether	VOC	C	3,200	Calculated Subpart S
Bromomethane	VOC	NC	112	Calculated Subpart S
Carbon tetrachloride	VOC	C	5	Calculated Subpart S
Chlorobenzene	VOC	NC	1,600	Calculated Subpart S
Chloroform	VOC	C	115	Calculated Subpart S
Chloromethane	VOC	C	538	Calculated Subpart S
Dibromomethane	VOC	C	0.008	Calculated Subpart S
1,2-Dichlorobenzene	VOC	NC	7,200	Calculated Subpart S
1,4-Dichlorobenzene	VOC	C	18,300	Calculated Subpart S
Dichlorodifluoromethane	VOC	C	16,000	Calculated Subpart S
Ethylbenzene	VOC	NC	8,000	Calculated Subpart S
Methylene bromide	VOC	NC	800	Calculated Subpart S
Methylene chloride	VOC	C	4,800	Calculated Subpart S
2-Methylnaphthalene	VOC	-	-	NA
1,1,2,2-Tetrachloroethane	VOC	C	35	Calculated Subpart S
Tetrachloroethylene (PCE)	VOC	C & NC	800	Calculated Subpart S
Toluene	VOC	NC	16,000	Calculated Subpart S
1,1,1-Trichloroethane	VOC	NC	7,200	Calculated Subpart S
Trichloroethylene (TCE)	VOC	C & NC	480	Calculated Subpart S
Trichlorofluoromethane	VOC	NC	24,000	Calculated Subpart S
1,2,3-Trichloropropane	VOC	C	480	Calculated Subpart S
Vinyl chloride	VOC	C	0.37	Calculated Subpart S
Xylene Total (m-, o-, p-)	VOC	NC	160,000	Calculated Subpart S
2,3,7,8-TCDD	Dioxin	C	0.000005	Calculated Subpart S

<sup>a</sup> RCRA 55 FR 30870

<sup>b</sup> Not available

<sup>c</sup> Highest background concentration detected in 50 background soil samples

<sup>d</sup> Smucker, Stanford J. USEPA Region IX, Preliminary Remedial Goals, Second Half, Sep. 1995

<sup>e</sup> Method detection limit for Volatile Organic Compounds by EPA Method 8260 or

<sup>f</sup> Semi-Volatile Organic Compounds analyzed by EPA Method 8270

<sup>g</sup> Nevada Division of Environmental Protection

<sup>h</sup> Cleanup level for PCB spills in accordance with Toxic Substance and Control Act Spill Policy Guidelines 40 CFR 761

## **Appendix C**

Nitrogen  
Method 353.2 (ASC)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	Nitrogen Nitrate mg/kg
B13-HA1-1-000	HA01	5/2/94	0	ASC	4.2
B13-HA1-1-005	HA01	5/2/94	5	ASC	2.1
B13-HA2-1-005	HA01	5/2/94	5	ASC	1.4
B13-HA1-2-000	HA02	5/2/94	0	ASC	3.3
B13-HA1-3-000	HA03	5/2/94	0	ASC	6.3
B13-HA1-3-005	HA03	5/2/94	5	ASC	5.1
<hr/>					
Analyses					6
Detections					6
Minimum Concentration					1.4
Maximum Concentration					6.3
HWAD - PCG					128000
HWAD - PCG Hits					0

Notes:

Zero values listed for maximum and minimum concentrations indicate a nondetect value for that analyte.

**Metals**  
Method 6010A (ASC)

Sample ID	Location ID	Sample Date	Depth (feet)	$\text{La}^{\beta}$	Barium	Beryllium	Cadmium	Chromium Total	Silver	Arsenic	Lead	Selenium
B13-CPS1-1-014	CPS01	4/2/91	14	ASC	75	<0.51	71	<1	NA	NA	NA	NA
B13-HA1-1-000	HA01	5/2/94	0	ASC	54	<0.5	3.6	<1	2.5	5.6	5.6	<0.5
B13-HA1-1-005	HA01	5/2/94	5	ASC	21	<0.52	3.5	<1	3.3	2.1	2.1	<0.52
B13-HA2-1-005	HA01	5/2/94	5	ASC	18	<0.51	3.1	<1	2.9	2.2	2.2	<0.51
B13-HA1-2-000	HA02	5/2/94	0	ASC	190	<0.58	6.8	<1.2	5	8.8	8.8	<0.58
B13-HA1-3-000	HA03	5/2/94	0	ASC	53	<0.52	3.5	<1	2	5	5	<0.52
B13-HA1-3-005	HA03	5/2/94	5	ASC	150	<0.57	4.1	<1.1	2.7	3.8	3.8	<0.57
B13-CPS1-1-008	CPS01	5/24/94	8	ASC	85	<0.57	6	<1.1	2	2.5	2.5	<0.57
<hr/>												
Analyses					8	8	8	8	8	7	7	7
Detections					8	0	0	8	0	7	7	0
Minimum Concentration					18	0	0	3.1	0	2	2.1	0
Maximum Concentration					190	0	0	71	0	5	8.8	0
HWAD - PCG					2000	1	20	20	100	100	100	20
HWAD - PCG Hits					0	0	0	1	0	0	0	0

Notes:

NA = Not analyzed

Zero values listed for maximum and minimum concentrations indicate a nondetect value for that analyte.

Arsenic  
Method 7060 (ASC)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	Arsenic
					mg/kg
B13-CPS1-1-014	CPS01	4/2/91	14	ASC	5.4
B13-HA1-1-000	HA01	5/2/94	0	ASC	2.5
B13-HA1-1-005	HA01	5/2/94	5	ASC	3.3
B13-HA2-1-005	HA01	5/2/94	5	ASC	2.9
B13-HA1-2-000	HA02	5/2/94	0	ASC	5
B13-HA1-3-000	HA03	5/2/94	0	ASC	2
B13-HA1-3-005	HA03	5/2/94	5	ASC	2.7
B13-CPS1-1-008	CPS01	5/24/94	8	ASC	2

Analyses	8
Detections	8
Minimum Concentration	2
Maximum Concentration	5.4
HWAD - PCG	100
HWAD - PCG Hits	0

Notes:

Zero values listed for maximum and minimum concentrations indicate a nondetect value for that analyte.

Lead  
Method 7421 (ASC)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	Lead
mg/kg					
B13-CPS1-1-014	CPS01	4/2/91	14	ASC	1.9
B13-HA1-1-000	HA01	5/2/94	0	ASC	5.6
B13-HA1-1-005	HA01	5/2/94	5	ASC	2.1
B13-HA2-1-005	HA01	5/2/94	5	ASC	2.2
B13-HA1-2-000	HA02	5/2/94	0	ASC	8.8
B13-HA1-3-000	HA03	5/2/94	0	ASC	5
B13-HA1-3-005	HA03	5/2/94	5	ASC	3.8
B13-CPS1-1-008	CPS01	5/24/94	8	ASC	2.5
<hr/>					
Analyses					8
Detections					8
Minimum Concentration					1.9
Maximum Concentration					8.8
<hr/>					
HWAD - PCG					100
HWAD - PCG Hits					0

Notes:

Zero values listed for maximum and minimum concentrations indicate a nondetect value for that analyte.

Mercury  
Method 7471 (ASC)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	Mercury
mg/kg					
B13-CPS1-1-014	CPS01	4/2/91	14	ASC	<0.1
B13-HA1-1-000	HA01	5/2/94	0	ASC	<0.1
B13-HA1-1-005	HA01	5/2/94	5	ASC	<0.1
B13-HA2-1-005	HA01	5/2/94	5	ASC	<0.1
B13-HA1-2-000	HA02	5/2/94	0	ASC	<0.12
B13-HA1-3-000	HA03	5/2/94	0	ASC	<0.1
B13-HA1-3-005	HA03	5/2/94	5	ASC	<0.11
B13-CPS1-1-008	CPS01	5/24/94	8	ASC	<0.11

Analyses	8
Detections	0
Minimum Concentration	0
Maximum Concentration	0
HWAD - PCG	24
HWAD - PCG Hits	0

Notes:

Zero values listed for maximum and minimum concentrations indicate a nondetect value for that analyte.

**Selenium  
Method 7740 (ASC)**

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	Selenium
mg/kg					
B13-CPS1-1-014	CPS01	4/2/91	14	ASC	<0.51
B13-HA1-1-000	HA01	5/2/94	0	ASC	<0.5
B13-HA1-1-005	HA01	5/2/94	5	ASC	<0.52
B13-HA2-1-005	HA01	5/2/94	5	ASC	<0.51
B13-HA1-2-000	HA02	5/2/94	0	ASC	<0.58
B13-HA1-3-000	HA03	5/2/94	0	ASC	<0.52
B13-HA1-3-005	HA03	5/2/94	5	ASC	<0.57
B13-CPS1-1-008	CPS01	5/24/94	8	ASC	<0.57

Analyses	8
Detections	0
Minimum Concentration	0
Maximum Concentration	0
HWAD - PCG	20
HWAD - PCG Hits	0

Notes:

Zero values listed for maximum and minimum concentrations indicate a nondetect value for that analyte.

**Explosives**  
**Method 8330 (ASC)**

Sample ID	Location ID	Sample Date	Lab	Depth (feet)	2,4,6-TNT						
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
B13-CPS1-1-014	CPS01	4/2/91	14	ASC	<1	<1	<1	<1	<1	<1	
B13-HA1-1-000	HA01	5/2/94	0	ASC	<1	<1	<1	<1	<1	<1	
B13-HA1-1-005	HA01	5/2/94	5	ASC	<1	<1	<1	<1	<1	<1	
B13-HA2-1-005	HA01	5/2/94	5	ASC	<1	<1	<1	<1	<1	<1	
B13-HA1-2-000	HA02	5/2/94	0	ASC	200	1.6	<1	9.9	<1	<1	
B13-HA1-3-000	HA03	5/2/94	0	ASC	31	0.56	<1	8.4	<1	<1	
B13-HA1-3-005	HA03	5/2/94	5	ASC	1.9	<1	<1	<1	<1	<1	
B13-CPS1-1-008	CPS01	5/24/94	8	ASC	<1	<1	<1	<1	<1	<1	
2,6-Dinitrotoluene						2,6-Dinitrotoluene					
2-Amino-4,6-DNT						2-Amino-4,6-DNT					
2-Nitrotoluene						2-Nitrotoluene					
3-Nitrotoluene						3-Nitrotoluene					
4-Amino-2,6-DNT						4-Amino-2,6-DNT					
4-Nitrotoluene						4-Nitrotoluene					

Notes:  
 NE = Not established  
 Zero values listed for maximum and minimum concentrations indicate a nondetect value for that analyte.

Analyses  
 Detections  
 Minimum Concentration  
 Maximum Concentration  
 HWAD - PCG  
 HWAD - PCG Hits

**Explosives  
Method 8330 (ASC)**

Sample ID	Location ID	Sample Date	Depth (feet)	TNT	HMX	mg/kg	3-Dinitrobenzene	2-Nitrobenzene	RDX	mg/kg	mT	mg/kg	sym-Trinitrobenzene	Tetryl	mg/kg	
CPS01		4/2/94	14	ASC	<1	<1			<1	<1	<1	<1	<1	<1	<1	
HA01		5/2/94	0	ASC	<1	<1			<1	<1	<1	<1	<1	<1	<1	
HA01		5/2/94	5	ASC	<1	<1			<1	<1	<1	<1	<1	<1	<1	
HA01		5/2/94	5	ASC	<1	<1			<1	<1	<1	<1	<1	<1	<1	
HA02		5/2/94	0	ASC	<1	<1			<1	<1	<1	<1	<1	<1	<1	
HA03		5/2/94	0	ASC	<1	<1			<1	<1	<1	<1	<1	<1	<1	
HA03		5/2/94	5	ASC	<1	<1			<1	<1	<1	<1	<1	<1	<1	
CPS01		5/24/94	8	ASC	0.93	<1			<1	1.5	<1	<1	<1	<1	<1	
Analyses						8				8		8		8		8
Detections						1				0		2		3		0
Minimum Concentration						0.93				0		1.5		3.6		0
Maximum Concentration						0.93				0		6.7		11		0
HWAD - PCG						4000				40		64		4		800
HWAD - PCG Hits						0				0		0		2		0

Notes:

NE = Not established

Zero values listed for maximum and minimum concentrations indicate a nondetect value for that analyte.

Explosives  
Method 8330 (CCAS)

Sample ID	Location ID	Sample Date	Depth	Aquifer	2,3-Dinitrotoluene	2,4,6-Trinitrotoluene	2,4-Dinitrotoluene	3,4- and 2,6-Dinitrotoluene	Picric Acid	RDX
DZB-101-13-MW4	DZB101-13MW04	5/23/89	0	<1	<0.2	<0.5	<0.5	<0.2	<1	<1
DZB-101-13-MW4D	DZB101-13MW04	5/23/89	0	<1	<0.2	<0.5	<0.5	<0.2	<1	<1
DZB-101-13-MW5	DZB101-13MW05	5/23/89	0	<1	<0.2	<0.5	<0.5	3.6	<1	<1
DZB-101-13-MW5D	DZB101-13MW05	5/23/89	0	<1	<0.2	<0.5	<0.5	<0.2	<1	<1
DZB-101-13-MW8	DZB101-13MW08	5/23/89	0	<1	<0.2	<0.5	<0.5	1.2	<1	<1
DZB-101-13-MW8D	DZB101-13MW08	5/23/89	0	<1	<0.2	<0.5	<0.5	<0.2	<1	<1
DZB-101-15-MW6	DZB101-15MW06	5/23/89	0	<1	<0.2	<0.5	<0.5	<0.2	<1	<1
DZB-101-15-MW6D	DZB101-15MW06	5/23/89	0	<1	<0.2	<0.5	<0.5	<0.2	<1	<1
DZB-101-15-MW7	DZB101-15MW07	5/23/89	0	<1	<0.2	<0.5	<0.5	<0.2	<1	<1
DZB-101-15-MW7D	DZB101-15MW07	5/23/89	0	<1	<0.2	2	<0.5	<0.2	<1	<1
Analyses		10	10	10	10	10	10	10	10	10
Detections		0	0	1	0	2	2	2	2	0
Minimum Concentration		0	0	0	2	3	3	1.2	0	0
Maximum Concentration		0	0	0	2	3	3	3.6	0	0
MCL	NE	NE	NE	NE	NE	NE	1	NE	NE	NE
MCL Hits	NE	NE	NE	NE	NE	NE	2	NE	NE	NE
PRG	NE	0.0002	0.073	NE	NE	NE	0.00061	0	0	0
PRG Hits	0	1	NE	NE	NE	NE	0	0	0	0

Notes:

NA = Not analyzed

NE = Not established

Zero values listed for maximum and minimum concentrations indicate a nondetect value for that analyte.

HWD Action Level based on guidance from ASTDR and NDEP approval.

Picric Acid  
Method 8330M (ASC)

Sample ID	Location ID	Sample Date	Depth (feet)	Lab	Picric Acid
mg/kg					
B13-CPS1-1-014	CPS01	4/2/91	14	ASC	<0.25
B13-HA1-1-000	HA01	5/2/94	0	ASC	<0.25
B13-HA1-1-005	HA01	5/2/94	5	ASC	<0.25
B13-HA2-1-005	HA01	5/2/94	5	ASC	<0.25
B13-HA1-2-000	HA02	5/2/94	0	ASC	<0.25
B13-HA1-3-000	HA03	5/2/94	0	ASC	<0.25
B13-HA1-3-005	HA03	5/2/94	5	ASC	<0.25
B13-CPS1-1-008	CPS01	5/24/94	8	ASC	<0.25

Analyses	8
Detections	0
Minimum Concentration	0
Maximum Concentration	0
HWAD - PCG	7
HWAD - PCG Hits	0

Notes:

Zero values listed for maximum and minimum concentrations indicate a nondetect value for that analyte.

## **Appendix D**

Applied P & Ch Laboratory

13760 Magnolia Ave., Chino CA 91710

Tel: (800) 590-1228 Fax: (800) 590-1493

Submitted to:

Tatra Tech, Inc. (San Francisco)

Attention: Ray Roenbeck

180 Howard St. Ste. 250

San Francisco CA 94105

Tel: (415) 674-1221 Fax: (415) 674-5914

**APCL Analytical Report**

Service ID #: 801.992448

Received: 03/12/99

Collected by: GM/FH

Extracted: 03/17/99

Collected on: 03/10/99

Tested: 03/17-23/99

Reported: 03/24/99

Sample Description: Soil from Hawthorne NV

Project Description: HAWD-101

**Analysis of Soil Samples**

Component Analyzed	Method	Unit	Analysis Result				
			PQL	CS13-BB-01 99-02448-1	CS13-BB-02 99-02448-2	CS13-SA-01 99-02448-3	CS13-SA-02 99-02448-4
MOISTURE	ASTM-D2216	%Moisture	0.5	2.5	2.5	2.4	1.2
NITROAROMATICS AND NITROAMINES (a)				5	5	1	5
Dilution Factor				<0.20	<0.20	<0.20	<1.0
4-AMINO-2,6-DINITROTOLUENE	8330	mg/kg	0.2	8.6	4.6	<0.20	<1.0
2-AMINO-4,6-DINITROTOLUENE	8330	mg/kg	0.2	6.5	4.9	<0.20	<1.0
1,3-DINITROBENZENE	8330	mg/kg	0.25	<1.3	<1.3	<0.20	<1.3
2,4-DINITROTOLUENE	8330	mg/kg	0.25	<1.3	0.5J	<0.20	<1.3
2,6-DINITROTOLUENE	8330	mg/kg	0.25	<1.3	<1.3	<0.20	<1.3
HMX	8330	mg/kg	0.25	<1.3	1.4	1.0	1.7
NITROBENZENE	8330	mg/kg	0.25	<1.3	<1.3	<0.20	<1.3
3-NITROTOLUENE	8330	mg/kg	0.25	<1.3	<1.3	<0.20	<1.3
RDX	8330	mg/kg	0.25	1J	23	17.0	27
TETRYL	8330	mg/kg	0.25	<1.3	<1.3	<0.20	<1.3
1,3,5-TRINITROBENZENE	8330	mg/kg	0.25	2.1	5.1	<0.20	<1.3
2,4,6-TRINITROTOLUENE	8330	mg/kg	0.25	23	16	<0.20	<1.3
2/4-NITROTOLUENE	8330	mg/kg	0.25	<1.3	<1.3	<0.20	<1.3

Component Analyzed	Method	Unit	Analysis Result				
			PQL	CS13-SA-03 99-02448-5	CS13-SA-04 99-02448-6	CS13-SA-05 99-02448-7	CS13-SA-06 99-02448-8
MOISTURE	ASTM-D2216	%Moisture	0.5	2.8	3.0	1.7	3.2
NITROAROMATICS AND NITROAMINES (a)				1	1	1	1
Dilution Factor				<0.20	<0.20	<0.20	<0.21
4-AMINO-2,6-DINITROTOLUENE	8330	mg/kg	0.2	<0.21	<0.21	<0.20	0.3
2-AMINO-4,6-DINITROTOLUENE	8330	mg/kg	0.2	0.62	<0.21	<0.20	<0.26
1,3-DINITROBENZENE	8330	mg/kg	0.25	<0.26	<0.26	<0.25	<0.36
2,4-DINITROTOLUENE	8330	mg/kg	0.25	<0.26	<0.26	<0.25	<0.26
2,6-DINITROTOLUENE	8330	mg/kg	0.25	<0.26	<0.26	<0.26	0.1J
HMX	8330	mg/kg	0.25	<0.26	<0.26	<0.26	<0.26
NITROBENZENE	8330	mg/kg	0.25	<0.26	<0.26	<0.25	<0.26
3-NITROTOLUENE	8330	mg/kg	0.25	<0.26	0.2J	<0.26	<0.26
RDX	8330	mg/kg	0.25	<0.26	<0.26	<0.25	<0.26
TETRYL	8330	mg/kg	0.25	<0.26	<0.26	<0.25	<0.26
1,3,5-TRINITROBENZENE	8330	mg/kg	0.25	<0.26	<0.26	<0.25	1.1
2,4,6-TRINITROTOLUENE	8330	mg/kg	0.25	0.62	<0.26	<0.25	<0.26
2/4-NITROTOLUENE	8330	mg/kg	0.25	<0.26	<0.26	<0.25	<0.26

Applied P & Ch Laboratory

13780 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1428

# APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result			
				CS13-SA-07 99-02448-9	CS13-SA-08 99-02448-10	CS13-SA-09 99-02448-11	CS13-SW-01 99-02448-12
MOISTURE	ASTM-D2218	%Moisture	0.5	1.8	2.2	2.8	11.0
NITROAROMATICS AND NITROAMINES (a)				1	1	1	1
Dilution Factor							
4-AMINO-2,6-DINITROTOLUENE	8330	mg/kg	0.2	<0.30	<0.20	<0.21	<0.22
2-AMINO-4,6-DINITROTOLUENE	8330	mg/kg	0.2	<0.20	<0.20	<0.21	<0.22
1,3-DINITROBENZENE	8330	mg/kg	0.25	<0.25	<0.26	<0.26	<0.26
2,4-DINITROTOLUENE	8330	mg/kg	0.25	<0.25	<0.26	<0.26	<0.26
2,6-DINITROTOLUENE	8330	mg/kg	0.25	<0.25	<0.26	<0.26	0.50
HMX	8330	mg/kg	0.25	<0.25	<0.26	<0.26	<0.26
NITROBENZENE	8330	mg/kg	0.25	<0.25	<0.26	<0.26	<0.26
3-NITROTOLUENE	8330	mg/kg	0.25	<0.25	<0.26	<0.26	6.42
RDX	8330	mg/kg	0.25	<0.25	<0.26	<0.26	<0.26
TETRYL	8330	mg/kg	0.25	<0.25	<0.26	<0.26	0.40
1,3,5 TRINITROBENZENE	8330	mg/kg	0.25	<0.25	<0.26	<0.26	<0.26
2,4,6-TRINITROTOLUENE	8330	mg/kg	0.25	<0.25	<0.26	<0.26	<0.26
2/4-NITROTOLUENE	8330	mg/kg	0.25	<0.25	<0.26	<0.26	<0.26

Component Analyzed	Method	Unit	PQL	Analysis Result		
				CS13-SW-02 99-02448-13	CS13-SW-03 99-02448-14	CS13-SW-04 99-02448-15
MOISTURE	ASTM-D2218	%Moisture	0.5	1.3	2.1	1.6
NITROAROMATICS AND NITROAMINES (a)				1	1	1
Dilution Factor						
4-AMINO-2,6-DINITROTOLUENE	8330	mg/kg	0.2	<0.20	<0.20	<0.20
2-AMINO-4,6-DINITROTOLUENE	8330	mg/kg	0.2	<0.20	<0.20	<0.20
1,3-DINITROBENZENE	8330	mg/kg	0.25	<0.25	<0.26	<0.25
2,4-DINITROTOLUENE	8330	mg/kg	0.25	<0.25	<0.26	<0.25
2,6-DINITROTOLUENE	8330	mg/kg	0.25	<0.25	<0.26	<0.25
HMX	8330	mg/kg	0.25	0.45	<0.26	<0.25
NITROBENZENE	8330	mg/kg	0.25	<0.25	<0.26	<0.25
3-NITROTOLUENE	8330	mg/kg	0.25	<0.25	<0.26	<0.25
RDX	8330	mg/kg	0.25	4.9	<0.26	<0.25
TETRYL	8330	mg/kg	0.25	<0.25	<0.26	<0.25
1,3,5 TRINITROBENZENE	8330	mg/kg	0.25	2.4	<0.26	<0.25
2,4,6-TRINITROTOLUENE	8330	mg/kg	0.25	<0.25	<0.26	<0.25
2/4-NITROTOLUENE	8330	mg/kg	0.25	<0.25	<0.26	<0.25

Component Analyzed	Method	Unit	PQL	Analysis Result		
				CS13-SW-05 99-02448-16	CS13-SW-06 99-02448-17	CS13-SW-07 99-02448-18
MOISTURE	ASTM-D2218	%Moisture	0.5	1.5	1.3	1.2

Applied P & Ch Laboratory.

19700 Magnolia Ave. Chino CA 91710

Tel: (909) 580-1828 Fax: (909) 580-1488

# APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result		
				CS13-SW-05 99-02448-16	CS13-SW-06 99-02448-17	CS13-SW-07 99-02448-18
<b>NITROAROMATICS AND NITROAMINES</b>						
Dilution Factor				1	1	1
4-AMINO-2,6-DINITROTOLUENE	8330	mg/kg	0.2	<0.20	<0.20	<0.20
2-AMINO-4,6-DINITROTOLUENE	8330	mg/kg	0.2	<0.20	<0.20	<0.20
1,3-DINITROBENZENE	8330	mg/kg	0.25	<0.25	<0.25	<0.25
2,4-DINITROTOLUENE	8330	mg/kg	0.25	<0.25	<0.25	<0.25
2,6-DINITROTOLUENE	8330	mg/kg	0.25	<0.25	<0.25	<0.25
HMX	8330	mg/kg	0.25	<0.25	<0.25	<0.25
NITROBENZENE	8330	mg/kg	0.25	<0.25	<0.25	<0.25
3-NITROTOLUENE	8330	mg/kg	0.25	<0.25	<0.25	<0.25
RDX	8330	mg/kg	0.25	<0.25	<0.25	<0.25
TETRYL	8330	mg/kg	0.25	<0.25	<0.25	<0.25
1,3,5-TRINITROBENZENE	8330	mg/kg	0.25	<0.25	<0.25	<0.25
2,4,6-TRINITROTOLUENE	8330	mg/kg	0.25	<0.25	<0.25	<0.25
2/4-NITROTOLUENE	8330	mg/kg	0.25	<0.25	<0.25	<0.25

Component Analyzed	Method	Unit	PQL	Analysis Result		
				HA13-BB-01 99-02448-19	HA13-BB-02 99-02448-20	HA13-BB-03 99-02448-21
<b>MOISTURE</b>						
ASTM-D2216		%Moisture	0.5	2.8	2.6	5.3
<b>NITROAROMATICS AND NITROAMINES (a)</b>						
Dilution Factor				1	1	1
4-AMINO-2,6-DINITROTOLUENE	8330	mg/kg	0.2	<0.21	0.3	<0.21
2-AMINO-4,6-DINITROTOLUENE	8330	mg/kg	0.2	<0.21	0.4	<0.21
1,3-DINITROBENZENE	8330	mg/kg	0.25	<0.26	<0.26	<0.26
2,4-DINITROTOLUENE	8330	mg/kg	0.25	<0.26	<0.26	<0.26
2,6-DINITROTOLUENE	8330	mg/kg	0.25	<0.26	<0.26	<0.26
HMX	8330	mg/kg	0.25	<0.26	<0.26	<0.26
NITROBENZENE	8330	mg/kg	0.25	<0.26	<0.26	<0.26
3-NITROTOLUENE	8330	mg/kg	0.25	<0.26	0.21	<0.26
RDX	8330	mg/kg	0.25	<0.26	<0.26	<0.26
TETRYL	8330	mg/kg	0.25	<0.26	1.1	1.1
1,3,5-TRINITROBENZENE	8330	mg/kg	0.25	0.67	6.21	0.37
2,4,6-TRINITROTOLUENE	8330	mg/kg	0.25	2.8	<0.26	<0.26
2/4-NITROTOLUENE	8330	mg/kg	0.25	<0.26	<0.26	<0.26

PQL: Practical Quantitation Limit. MDL: Method Detection Limit.

CRDL: Contract Required Detection Limit

N.D.: Not Detected or less than the practical quantitation limit.

": Analysis is not required.

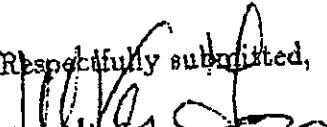
J: Reported between PQL and MDL.

† All results are reported on dry basis for soil samples.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

(a) Positive results had been confirmed by second column.

Respectfully submitted,



Dominic Lau  
Laboratory Director  
Applied P & Ch Laboratory

## **Appendix E**



B13, View into north pit.

SWMU B-13 – December 1997



SWMU B-13 – September 1999